

Date: Tue, 24 May 94 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #133
To: Ham-Space

Ham-Space Digest Tue, 24 May 94 Volume 94 : Issue 133

Today's Topics:

A0-27 Success!
APT-Satellites: Report MAY 22, 1994
Element set accuracy / antenna's (2 msgs)
looking for 2m all mode for sat work

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 23 May 94 22:10:05 GMT
From: sdd.hp.com!hpscit.sc.hp.com!icon!greg@hplabs.hpl.hp.com
Subject: A0-27 Success!
To: ham-space@ucsd.edu

Hi, folks,

I finally was able to get into A0-27 this weekend! My problem before seems to be related to my Icom R-7000 receiver (plus an external preamp) not being able to hear the bird. I got a fine signal going into the 430 module in my base rig (Yaesu 767GX), so I thought I'd try running half duplex, and it worked! I still don't know how I sounded, but the reports were that I had a good signal. I was running about 30 watts into a homemade (poorly) 5 element beam at the end of 60' of RG-8.

The downlink is still a bit of a problem. The signal can go from full quieting to zip in a matter of a few seconds. I don't know if this is due to polarization, obstructions, atmospheric, or something else. My antenna is fixed in elevation at about 10 degrees, and horizontally polarized. It's an

8 element Quagi (better construction than the 2m beam, but still not perfect). Reception didn't really start until the satellite was well above the horizon (say, 25 degrees on a 45 degree pass), and it ramped quickly to a good level. Sorry, but I didn't check the S-meter. It wavered a bit, dropped out, came back, and then dropped out for good. That was again about 20 degrees up. With those elevations, and a 500 mi orbit, that makes for a real quick pass. The uplink antenna, BTW, is vertically polarized.

Thanks to all those who helped me get on this bird! Hope to hear you on an upcoming pass.

Greg KD6KGW

p.s. Any idea why my Icom R-7000 appears to be so deaf? I know the specs aren't as good as the Yaesu (.5uv vs .32uv sensitivity), but the 10db preamp should more than make up for it.

Date: 24 May 1994 07:11:21 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!xlink.net!nntp.gmd.de!
NewsWatcher!user@network.ucsd.edu
Subject: APT-Satellites: Report MAY 22, 1994
To: ham-space@ucsd.edu

Observed at station 50.7 NLat, 7.1 ELon, MAY 22, 1994

NOAA-9: APT 137.62 On
NOAA-10: APT 137.50 *OFF*
NOAA-11: APT 137.62 On
NOAA-12: APT 137.50 On
Meteor 2-21: APT 137.40 On (weak)
Meteor 3-5: APT 137.85 On

NOAA-10 is near NOAA-12, NOAA-10-APT is off to avoid interference (VHF-conflict).
Meteor 3-5 was to be switched off MAY 21 according to the last FANAS-info but APT was active during late afternoon ascending orbits on MAY 22 (low sun-angle vis-images).

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| (henne@gmd.de) |
|German Nat.Research Center.f.Comp.Science |
|D-53754 St.AUGUSTIN, Germany |
+-----+

Date: Mon, 23 May 1994 08:31:26 GMT
From: ihnp4.ucsd.edu!swrinde!emory!kd4nc!ke4zv!gary@network.ucsd.edu
Subject: Element set accuracy / antenna's
To: ham-space@ucsd.edu

In article <2roiioINNp2h@no-names.nerdc.ufl.edu> mikel@alpha.ee.ufl.edu (Mike Lewis) writes:

>Hi all:

> I have a couple of quick questions, if someone can point me to a FAQ
>which covers them, or perhaps just drop an e-mail message. I have been
>trying to work the MIR space station and two things have come up. First
>I am running STSPLUS and have obtained several sets of satellite element
>sets, I have noticed that the different element sets give different! orbit
>projections!!!! What's up?, are the element sets only valid for a finite
>amount of time? How often should one get updated lists?

MIR (and Shuttle) make frequent orbit adjustments. So you need new orbital elements frequently for these two. Other satellite orbits change less often, and less drastically, so you don't need to update their elements quite so frequently. During a Shuttle mission, you'll likely want to update your orbital elements *daily*. For MIR, you don't have to update that often unless they are in the process of docking a supply freighter, or making an orbital adjustment. Every couple of weeks is sufficient when only atmospheric drag is affecting their orbit. Most other satellites will only change orbit due to atmospheric drag, and most other satellites are in higher orbits than MIR or Shuttle, so their orbits change less rapidly. You may need new orbital elements for them only every three months or so.

>Secondly, I'm using

>a 1/4 wave ground plane antenna with about 25 W from an IC-27A, I can hear
>MIR on occasion is there anyway to verify that MIR could hear me? It seems to
>always be busy, when(if) I get the opportunity to connect I'd like to be
>sure that MIR can hear me. Thanks in advance for any help you can provide.

The only way you can be sure MIR's packet robot hears you is if you get a connect. If you've allowed for doppler shift, and if your tones are at 3 kHz or less, 25 watts should be sufficient. However, a groundplane isn't an ideal antenna for this purpose. You'd do better with a Lindenblad or Quadrafilar Helix. Still, with the right geometry, you should be able to make a connect.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary

Lawrenceville, GA 30244

Date: Mon, 23 May 1994 16:12:31 GMT
From: pa.dec.com!nntpd2.cxo.dec.com!iamu.chi.dec.com!little@decwrl.dec.com
Subject: Element set accuracy / antenna's
To: ham-space@ucsd.edu

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Yes, they are accurate for a finite amount of time. Orbital adjustments are made from time to time which really mess up the predictions as the orbit has changed. Plus the predictions are not 100% accurate. Their predictions are based upon models and have a finite accuracy. The result is that for low orbit birds like MIR where you only get a 10-15 minute pass, you want element sets that are around 2 weeks old or so. Older ones might work, but since they are easy enough to get, keeping current is a good practice.

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|>sure that MIR can hear me. Thanks in advance for any help you can provide.

If you got back a Busy rejection from the MIR BBS, then you were heard! 25 W should do fine, but it really depends upon the amount of QRM. Since many stations try to work MIR at the same time, only one can get into the BBS. The rest end up being QRM that interferes with MIR's ability to hear the station that is connected. Always monitor the downlink and wait until the currently connected station disconnects. Otherwise you just contribute to the QRM.

73,
Todd
N9MWB

Date: Mon, 23 May 1994 15:09:16 GMT

From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!vixen.cso.uiuc.edu!
milo.mcs.anl.gov!anagram.mcs.anl.gov!lent@network.ucsd.edu
Subject: looking for 2m all mode for sat work
To: ham-space@ucsd.edu

I am looking to get into amateur satilitte radio.
Could someone describe a basic setup?
I am also looking for a 2m allmode for repeater work and as a first sat radio.
thanks alot

73
kc4zqg,
send replies to lent@mcs.anl.gov
h-708-257-0675
w-708-252-6815

End of Ham-Space Digest V94 #133
